REMARKS

In response to the Office Action dated May 17, 2005, Applicants submit the following remarks. Claims 1-11, 13 and 16-22 have been amended. Claims 5 and 8 have been cancelled without prejudice. Claim 1 has been amended to clarify that the deposition surface has a plurality of deposition regions defined thereon and each organic layer of a plurality of organic layers is fabricated by selectively depositing an organic solution into the deposition regions. Claims 23-24 are newly added. No new matter has been added. After entry of this amendment, claims 1-4, 6-7 and 9-24 remain pending.

Claim 1 is the only pending independent claim. Claim 1 is directed to an organic electronic device. The device includes a deposition surface and a plurality of organic layers. The deposition surface has a plurality of deposition regions defined thereon. Each organic layer is fabricated by selectively depositing an organic solution into the deposition regions on the deposition surface. A first portion of at least one of the plurality of organic layers is cross-linked to render the first portion insoluble during deposition of a subsequent layer.

In some embodiments, an organic electronic device including multiple organic layers can be provided by cross-linking a layer of organic material before depositing a subsequent layer of organic material (specification, page 6, lines 3-14). One problem with applying multiple layers of organic solutions on top of one another is that a previously formed organic layer may become insoluble when a subsequent layer is applied (page 3, lines 16-21). This is because many organic solutions are soluble in the same solvents, and thus in each other. However, when a layer is cross-linked, an additional organic layer can be deposited thereon without risk of dissolving the cross-linked layer. Cross-linking layers allows for forming an organic stack with any desired number of layers.

In addition to cross-linking the organic layers, the organic layers are fabricated by selectively depositing organic solutions onto a deposition surface (page 9, lines 4-14). Inkjet printing is just one way to selectively depositing a solution. Deposition regions where the solutions are selectively deposited can be formed in a number of ways, such as by forming pockets in a photo-resist layer or by etching a substrate or a lower electrode layer to form wells (page 10, lines 1-21). Selective deposition of the organic solutions is advantageous over other deposition techniques, such as spin coating. Spin coating and other such techniques form a layer of material that must be subsequently processed if a pattern of discrete areas of material is

desired (page 4, lines 13-19). Such additional processing steps can complicate device processing and potentially damage the device. Thus, it can be advantageous to make further processing steps unnecessary.

Claim Rejections under 35 U.S.C. § 112

Claims 13 and 16 were rejected for being indefinite. Claims 13 has been amended to describe the PEDOT:PSS solution as including constituents capable of cross-linking. Claim 16 now describes the device as having at least a first layer and a second layer, the first layer including a different material from the second layer. Applicants respectfully request that the indefiniteness rejections be withdrawn.

Claim Rejections under 35 U.S.C. § 102

Prior to this response, claims 1-4, 6-7, 9-13, 15-18 and 21 were rejected as anticipated by U.S. Application Number 2004/0101618 ("Ottermann"), claims 1-4, 14, 17, 18 and 21 were rejected as anticipated by U.S. Application Number 2004/0266207 ("Sirringhauss"), claims 1, 6-7, 9-12 and 15 were rejected as anticipated by *Multi-colour Organic Light-emitting Displays by Solution Processing*, Nature, Vol. 421, February 2003, 829-833 ("Müller"). Applicants respectfully disagree.

Ottermann does not teach fabricating organic layers by selectively depositing an organic solution into deposition regions on a deposition surface and cross-linking a portion of at least one of the organic layers. Rather, in Ottermann a solution is dip coated onto a substrate and cross-linked (paragraph 21). Dip coating involves dipping the substrate into a liquid containing suitable polymers or monomers and drawing the substrate out so that a film of liquid is formed on the substrate (paragraph 58, Fig. 1). The dip coated layer is cross-linked (paragraph 30). Ottermann teaches that dip coating is superior to other deposition techniques, such as vapor deposition or printing, because the other deposition techniques lack desired layer homogeneity (paragraphs 3-4, 18). Thus, Ottermann teaches away from fabricating an organic layer by selectively depositing an organic solution into deposition regions on a deposition surface.

Sirringhauss also fails to teach fabricating organic layers by selectively depositing an organic solution into deposition regions on a deposition surface and cross-linking a portion of at least one of the organic layers as claimed. Rather, Sirringhauss describes patterning an

electroactive polymer film 3 that is applied on a substrate 1 (Fig. 1, paragraph 33). The electroactive polymer film 3 is illustrated as coating the entirety of a flat substrate without deposition regions. The portion of the electroactive polymer film 3 that is to be retained to form the thin film transistor can be cross-linked to make the desired portion insoluble (paragraph 38). Thus, an organic layer that is cross-linked is not fabricated by selectively depositing an organic solution into a deposition region on a deposition surface, but rather cross-linking is used to aid in patterning a film of material.

Likewise, Müller spin coats a light emitting polymer layer onto a flat substrate, cross-links portions of the layer and develops the portions of the polymer that are not cross-linked (page 832, col. 1). Developing the portions that are not cross-linked forms a pattern of cross-linked polymers or a pixelated device. Müller points out that alternative techniques for forming pixelated devices, such as screen printing and ink jetting, are less than ideal because of inhomogeneous film formation and difficulties with placing drops at the correct location (page 829, col. 2, page 830, col. 1). Thus, Müller does not describe a device that has organic layers each formed by selectively depositing an organic solution into deposition regions on a deposition surface, where at least a portion of at least one of the organic layers is cross-linked.

Therefore, applicants request that the anticipation rejections over Ottermann, Sirringhauss and Müller be withdrawn.

Claim Rejections under 35 U.S.C. § 103

Claims 1-4, 6-7, 9, 13, 15 and 17-22 were rejected as being unpatentable over U.S. Application Number 2003/0170492 ("Anderson"). Applicants respectfully disagree.

Anderson describes a touch screen with conductive layers 18, 30 (paragraph 40). The conductive layers are cross-linked (paragraph 34). The conductive layers are web coated or spin coated to form the layers. The conductive layers are not formed by selectively depositing an organic solution into deposition regions on a deposition surface and cross-linking a portion of at least one of the organic layers.

For at least this reason, the applicants request that the rejections over Anderson be withdrawn.

No additional fee is believed to be due. If, however, there are any fees or charges, please apply them to deposit account 19-2179.

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